

REVIEWS OF BOOKS.

THE MODERN MASTOID OPERATION. By FREDERICK WHITING, A.M., M.D. Royal Square Octavo. Philadelphia: P. Blakiston's Son & Co.

The author in his preface excludes, as beyond the scope of the present work, the technique of the radical operation for chronic otorrhœa, and the methods of procedure in sinus thrombosis, brain abscess, and other intracranial inflammatory processes, but promises a publication covering this field in the not distant future. He well says that "as a life-saving measure few surgical procedures rival and none surpass in efficiency the modern mastoid operation."

The first portion of the work is historical and is divided into three chapters: the first chapter describes the development of the operation for drilling the mastoid process. The second chapter treats of the operation devised by Schwartze, to whom just credit is given in the following words: "Schwartze executed, and consequently enjoys the undisputed distinction of having clearly enunciated, the technical and symptomatic principles upon which are based the steps of the modern mastoid operation as performed to-day." The author states that Gruening's modification of the Schwartze operation—the removal of the mastoid tip—"was the only essential departure from Schwartze's original steps which twenty years of continuous experience had dictated." The third chapter describes what the author calls "the complete mastoid operation," "because of its intent to remove the entire cellular structure of the mastoid apophysis." The author claims as the first point of difference the method of making the tegumentary incision. The incision pictured, however, is not original, being to all intents the well-known and previously described classical

incision with a horizontal limb at right angles on a level with the centre of the external auditory meatus. This incision, which has been in use for some time by various surgeons, exposes to view "the entire mastoid apophysis," "thus insuring a comprehensive view of the operative field." "The second difference, from the Schwartze operation, as modified by Gruening, is the removal of the pneumatic spaces and diploic cells at the posterior root of the zygoma." To the author, himself, the credit for this modification is largely due. The author claims that "in every instance where secondary operation has been required in his service the offending agents were found" in this region. Purulent accumulations in the posterior root of the zygoma "have . . . in several instances in the writer's experience caused erosions of the inner table, and been responsible for small epidural abscesses of the middle cranial fossa, while cortical perforations of the root of the zygoma, with accompanying subperiosteal abscess, are by no means so infrequent as to excite special interest." "The thorough removal of the zygomatic cells in conjunction with a similar treatment of the mastoid tip has proved in the hands of the writer an unequivocal success, and he earnestly commends the procedure as a method calculated, when conscientiously pursued, to produce a satisfactory result in every instance:" this certainly is a strong claim if substantiated by time and experience, and the author has warrant in the latter. He regards "the complete mastoid operation as a positive assurance of successful healing and an infallible safeguard against the vexations and annoyances of secondary operation."

Chapter IV is concerned with the pathology of suppurative mastoiditis, and is so well written, so illuminating, and so much to the point, that any attempt to convey an adequate idea of its excellences would do the author an injustice: it should be read in the original.

The preliminary preparations for operation constitute the subject matter of Chapter V.

Chapter VI describes the tegumentary incisions.

Chapter VII is concerned with the elevation of the periosteum and the retraction and reflection of the flaps.

Chapters VIII, IX, and X describe the various stages of the attack on the bone up to the exposure and clearing out of the antrum. The author gouges out a groove beginning in the suprameatal triangle at the centre of the suprameatal spine and extending thence downward to the tip, keeping the posterior margin of the bony meatus in view and hugging it tightly; this groove is deepened until the cellular structure is reached, when the curette or Volkmann spoon is utilized to undermine the cortical bone. In infants and young children, the curette is used to make the initial groove and the entire opening in the mastoid bone. The bone wound is widened by making grooves parallel to the initial one in the cortex and removing the cellular structures with the curette, further advance being assisted by the use of the rongeur. After the antrum is opened, "the walls enclosing this space should then be removed until no overhanging borders remain": "the opening of the antrum is the step of fundamental importance." The author recommends that the operator "desist from using the chisel, and employ the curette and rongeur at the earliest moment possible."

The removal of the mastoid tip and of the cortex and cells overlying the sigmoid groove are described in Chapters XI and XII.

The author, in Chapter XIII, gives his reasons for and describes his method of removing the cells at the posterior root of the zygoma. These cells lie "just in front of and external to the antrum" and "are nearly always occupied in front of and external to the antrum" and "rare nearly always occupied by necrotic granulations when purulent mastoiditis has existed for any length of time." "The diploic structures in contact with the sigmoid groove and the overlying subcortical cells as far back as the posterior border of the groove should be curetted

until the inner table is smooth." "The rough and irregular margin of the entire opening in the mastoid process should be carefully smoothed with the rongeur and curette." The inflammatory process may be confined in exceptional cases to the region in and about the zygomatic cells. "With the removal of this portion of the mastoid, the last structures which are liable to die as the result of purulent mastoiditis disappear." "An operator will be certain of his result . . . only when all cellular structures have been removed." In smoothing the bone surface, "the curette should be held so that the cutting edge lies as nearly as possible horizontal with the surface which it is intended to smooth." "Surfaces which have thus been rendered smooth granulate much more rapidly and evenly and heal more quickly."

The author, in Chapters XIV, XV, and XVI deals with the closure, dressing, and after-care of the wound.

Chapter XVII covers the indications for the mastoid operation, with differential diagnosis. The author states that "deafness, subjective noises, fulness, and kindred sensations are of no material importance, and are entirely devoid of any significance;" the reviewer agrees with Sheppard, who attaches *considerable confirmatory significance* to the presence of persistent, well-marked throbbing tinnitus. "Deep boring pain which grows worse at night . . . must always be regarded as decidedly significant." The author rightly draws attention to "a symptom which is not always present, but which, when it exists, is entitled to consideration, decided prostration, or an indisposition for exertion or effort." Bulging of the superior posterior membranous canal wall "may be regarded as the most definite and pronounced of all fundus symptoms of mastoiditis." "The only distinct evidence of mastoiditis" which the tympanic membrane affords is a pronounced bulging. "Tenderness of the mastoid bone is justly and universally regarded as the one indication distinctly characteristic of mastoid disease;" "but negative testimony is unfortunately by no means conclusive evidence that the pneumatic

structures of the mastoid do not contain pus." The writer urges "that resort should be had to operative measures at the earliest moment when, in the presence of suppuration from the ear, a majority of the symptoms enumerated are to be recognized."

The book is a veritable triumph of the book-maker's art, handsomely bound, beautifully printed on heavy paper, and with most excellent plates. The reviewer has not in a long time enjoyed such a treat as in reading this most entertainingly written book. But this very excellence in the production of the book as such is also somewhat open to criticism, for it has involved a certain sacrifice in convenience, as the book is thereby made somewhat heavy and unwieldy, and the cost of production has necessitated the imposition of a selling price which must prove quite a tax upon those who will mainly be benefited by the reading of it, *i.e.*, the beginners in the otological field.

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INTERNATIONAL CLINICS. Edited by A. O. J. KELLY, A.M., M.D.
Vols. I and II, 1905. Philadelphia: J. B. Lippincott Company, 1905.

Vol. I of these excellent publications contains, besides articles on the general and other special subjects of medicine, a number of chapters dealing with surgical subjects of timely value. Among these chapters is one on skin-grafting in the treatment of the large ulcers following burns. This chapter presents some modifications of the methods in use, and reports a series of cases showing some excellent results. Another interesting chapter is on the starvation of malignant growths by depriving them of blood supply. A new operative method for the total extirpation of the larynx is described. The final two surgical chapters are upon the treatment of knee-joint disease, and the treatment of Glenard's disease

Vol. II contains chapters on lateral curvature of the spine; chronic arthritis; tuberculous spondylitis and coxitis; nerve